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L Number	Hits	Search Text	DB	Time stamp
82	637	((piezo or piezo\$1electric or piezoelectric or bimorph)	USPAT;	2004/11/03
		same elastic near3 deform\$6)	US-PGPUB;	12:08
			EPO; JPO	
84	6	(((piezo or piezo\$1electric or piezoelectric or	USPAT;	2004/11/03 12:10
		bimorph) same elastic near3 deform\$6)) and	US-PGPUB;	
		(magnetic adj dis\$1 adj (drive or apparatus))	EPO; JPO	
98	1	((thermal adj record\$3 same heat adj element) and	USPAT;	2004/11/03
	-	((capacitive or capacitance) adj actuator))	US-PGPUB;	13:04
		((capacitité di capacitation) dag de date ())	EPO; JPO	10.01
101	3	360/59,294.1,294.2,294.3,294.4,294.5,294.6.ccls.	USPAT;	2004/11/03
.01	3	and ((capacitive or capacitance) adj actuator)	US-PGPUB;	13:06
		and ((capacitive of capacitatice) day actuator)	EPO; JPO	13.00
	7902	(240/75.74.50) (4) 5	USPAT;	2004/10/20
	7902	(360/75,76,59). <i>CC</i> LS.	1	2004/10/29
			US-PGPUB;	08:31
			EPO; JPO	
-	709263	(micro-actuator\$3 microactuat\$3 microposition\$3	USPAT;	2004/10/27
		subactuat\$3 ((actuat\$3 position\$3 driver\$1 motor\$1)	US-PGPUB;	16:54
		near3 (auxiliary second\$4 fin\$2 micro sub dual piezo	EPO; JPO	
		piezoelectric\$4 pzt bimorph piggyback\$3 (piggy adj		
		back\$3))))		
-	418665	(((dis\$1 hard) near2 (drive apparatus)) HDA HDD	USPAT;	2004/10/27
		DASD RAID (magnetic storage drive\$1 assembly)	US-PGPUB;	16:40
		near2 (disk\$5 disc\$1 media medium) (storage near2	EPO; JPO	
		drive\$1))		
-	56948	((micro-actuator\$3 microactuat\$3 microposition\$3	USPAT;	2004/10/27
		subactuat\$3 ((actuat\$3 position\$3 driver\$1 motor\$1)	US-PGPUB;	16:41
		near3 (auxiliary second\$4 fin\$2 micro sub dual piezo	EPO; JPO	
		piezoelectric\$4 pzt bimorph piggyback\$3 (piggy adj		
		back\$3))))) and ((((dis\$1 hard) near2 (drive		
		apparatus)) HDA HDD DASD RAID (magnetic storage		
		drive\$1 assembly) near2 (disk\$5 disc\$1 media		
		medium) (storage near2 drive\$1)))		
_	925	((360/75,76,59).CCLS.) and (((micro-actuator\$3	USPAT;	2004/10/27
	723	microactuat\$3 microposition\$3 subactuat\$3	US-PGPUB;	16:41
		_((actuat\$3_position\$3_driver\$1_motor\$1) near3.	_EPO;_JPO	10.41
		(auxiliary second\$4 fin\$2 micro sub dual piezo		
		piezoelectric\$4 pzt bimorph piggyback\$3 (piggy adj		
		·		
		back\$3))))) and ((((dis\$1 hard) near2 (drive		
		apparatus)) HDA HDD DASD RAID (magnetic storage		
		drive\$1 assembly) near2 (disk\$5 disc\$1 media		
	-	medium) (storage near2 drive\$1))))		
-	3	(((360/75,76,59).CCLS.) and (((micro-actuator\$3	USPAT;	2004/10/27
		microactuat\$3 microposition\$3 subactuat\$3	US-PGPUB;	16:41
		((actuat\$3 position\$3 driver\$1 motor\$1) near3	EPO; JPO	
		(auxiliary second\$4 fin\$2 micro sub dual piezo		
		piezoelectric\$4 pzt bimorph piggyback\$3 (piggy adj		
		back\$3))))) and ((((dis\$1 hard) near2 (drive		
		apparatus)) HDA HDD DASD RAID (magnetic storage		
		drive\$1 assembly) near2 (disk\$5 disc\$1 media		
		medium) (storage near2 drive\$1))))) and (heat or		
		heater) adj element		

	·		I	
-	3	(((360/75,76,59).CCLS.) and (((micro-actuator\$3	USPAT;	2004/10/27
		microactuat\$3 microposition\$3 subactuat\$3	US-PGPUB;	16:50
		((actuat\$3 position\$3 driver\$1 motor\$1) near3	EPO; JPO	
		(auxiliary second\$4 fin\$2 micro sub dual piezo		
		piezoelectric\$4 pzt bimorph piggyback\$3 (piggy adj		
		back\$3))))) and ((((dis\$1 hard) near2 (drive		
		apparatus)) HDA HDD DASD RAID (magnetic storage		
		drive\$1 assembly) near2 (disk\$5 disc\$1 media		
		medium) (storage near2 drive\$1))))) and ((heat or	İ	
	4500	heater) adj element)		2004/40/07
-	6522	(magnetic adj (disk or disc or storage or medi\$2))	USPAT;	2004/10/27
		same slider	US-PGPUB;	16:52
	12	((magnetic ed.) (diet en dies an etances an ins diff 2))	EPO; JPO	2004/10/27
_	13	((magnetic adj (disk or disc or storage or medi\$2))	USPAT;	2004/10/27
		same slider) and ((heat or heater) adj element)	U5-PGPUB; EPO; JPO	16:53
	123401	piezo\$1electric or piezoelectric		2004/10/27
	123401	piezopitelecti ic or piezoelectric	USPAT; US-PGPUB;	2004/10/27 16:54
			EPO; JPO	10.54
_	381	((360/75,76,59).CCLS.) and (piezo\$1electric or	USPAT;	2004/10/27
		piezoelectric)	US-PGPUB;	16:54
			EPO; JPO	20.01
_	54	(((360/75,76,59).CCLS.) and (piezo\$1electric or	USPAT;	2004/10/27
		piezoelectric)) and (offset\$4)	US-PGPUB;	17:05
,			EPO; JPO	
_	1	(((360/75,76,59).CCLS.) and (piezo\$1electric or	USPAT;	2004/11/01 13:07
		piezoelectric)) and yaw adj angle	US-PGPUB;	
			EPO; JPO	
-	7	(((360/75,76,59).CCLS.) and (piezo\$1electric or	USPAT;	2004/10/27
		piezoelectric)) and yaw	US-PGPUB;	16:58
			EPO; JPO	
-	4	((((360/75,76,59).CCLS.) and (piezo\$1electric or	USPAT;	2004/10/27
		piezoelectric)) and (offset\$4)) and (heat or heater)	US-PGPUB;	17:06
			EPO; JPO	
-	201	((piezo or piezo\$1electric or piezoelectric or bimorph)	USPAT;	2004/10/28
		-near3 offset\$4)	US-PGPUB;	_11:56
		White the second	EPO; JPO	2004/44/22
-	3	(((piezo or piezo\$1electric or piezoelectric or	USPAT;	2004/11/03
		bimorph) near3 offset\$4)) and ((heat or heater) adj	US-PGPUB;	12:04
_	135128	element) piezo or piezo\$1electric or piezoelectric or bimorph	EPO; JPO USPAT;	2004/11/03
١٠	133128	piezo or piezogitelectric or piezoelectric or bimorph	US-PGPUB;	14:07
			EPO; JPO	14.07
_	8541	(360/75,76,59,77.02,77.03). <i>CC</i> LS.	USPAT;	2004/10/28
	3341	(000, 10, 10, 00, 11, 00, 11, 00, 00000.	US-PGPUB;	12:05
			EPO; JPO	12.03
_	192	(369/13.02,13.33). <i>CC</i> LS.	USPAT;	2004/10/28
			US-PGPUB;	12:00
			EPO; JPO	
-	518	(piezo or piezo\$1electric or piezoelectric or bimorph)	USPAT;	2004/10/28
		and ((360/75,76,59,77.02,77.03).CCLS.)	US-PGPUB;	12:00
			EPO; JPO	
-	473	((piezo or piezo\$1electric or piezoelectric or bimorph)	USPAT;	2004/10/28
		and ((360/75,76,59,77.02,77.03).CCLS.)) and (align\$4	US-PGPUB;	12:01
ı		or adjust\$4 or track\$4 or direction)	EPO; JPO	

182					
and (align\$4 or adjust\$4 or track\$4 or direction)) and (magnethe ad dis\$1)  1 ((3697\$302,13,33),CCL.5) and (((()iezo or piezo\$lectric or piezoslectric or bimorph) and ((()3697\$76,75,97.02,770,33),CCL.5), and ((()ign\$4 or adjust\$4 or track\$4 or direction))  9844 ((()iezo or piezo\$lelectric or piezoelectric or bimorph) adjust\$4 or track\$4 or direction) ((()iezo or piezo\$lelectric or piezoelectric or bimorph) adjust\$4 or piezo\$lelectric or piezoelectric or bimorph) adjust\$4 or piezo\$lelectric or piezoelectric or bimorph) adjust*4 or piezo\$lelectric or piezoelectric or piezoelectri	-	182	(((piezo or piezo\$1electric or piezoelectric or	USPAT;	i I
(magnetic adj dis\$1)   (369/13/30,21,33),30(2L,5), and (((piezo or piezo\$telectric or piezoelectric or bimorph) and (360/75,76,59,77.02,77.03),CCL,5.) and (elign\$4 or adjust\$4 or trackfor\$4 or directino)   USPAT: US-P6PUB; EPO: JPO   USPAT: US-P6PUB; E				- •	12:02
1 (3:69/13.02,13.33).CCLS,) and (((piezo or piezos) piezos) piezos piezos or piezos) piezos piezos ((3:60/75,76,59,77.02,77.03).CCLS,)) and (align\$4 or adjust\$4 or track\$4 or direction)) (piezo or piezos  electric or piezos  electric or bimorph) adj actuator) and (magnetic adj dis\$1)			and (align\$4 or adjust\$4 or track\$4 or direction)) and	EPO; JPO	
piezo\$lelectric or piezoelectric or bimorph) and (360/75,76,59,77.02,77.03).CCL.S.) and (align\$4 or adjust\$4 or track\$4 or direction))			(magnetic adj dis\$1)		
(360/75,76,59,77.02,77.03).CCL.S.)) and (align\$4 or adjust\$4 or track\$4 or direction))  9984 (piezo or piezo\$lelectric or piezoelectric or bimorph) adj actuator) and (magnetic adj dis\$1)  1315 ((piezo or piezo\$lelectric or piezoelectric or bimorph) adj actuator) and (magnetic adj dis\$1)  - 29 (360/75,76,59,77.02,77.03).CCL.S.) and (((piezo or piezo\$lelectric or piezoelectric or bimorph) adj actuator) and (magnetic adj dis\$1))  - 8653 (360/75,76,59,77.02,77.03).R0.D.S.  - 40 (((piezo or piezo\$lelectric or piezoelectric or bimorph) adj actuator) and (magnetic adj dis\$1)) and ((360/75,76,59,77.02,77.03,78.05).CCL.S.)  - 3718 ((piezo or piezo\$lelectric or piezoelectric or bimorph) adj actuator) and (magnetic adj dis\$1)) and ((360/75,76,59,77.02,77.03,78.05).CCL.S.)  - 3718 ((piezo or piezo\$lelectric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1)) and (magnetic adj dis\$1) and (mirror or lens or beam)) and (magnetic adj dis\$1)) and (magnetic adj dis\$1) and (mirror or lens or beam)) and (magnetic adj dis\$1)) and (magnetic adj dis\$1) and (mirror or lens or beam)) and (magnetic adj dis\$1)) and (magnetic adj dis\$1) and (mirror or lens or beam)) and (magnetic adj dis\$1) and (mirror or lens or beam)) and (magnetic adj dis\$1) and (mirror or lens or beam)) and (magnetic adj dis\$1) and (mirror or lens or beam)) and (magnetic adj dis\$1) and (mirror or lens or beam)) and (magnetic adj dis\$1) and (mirror or lens or beam)) and (magnetic adj dis\$1) and (mirror or lens or beam) and (mirror or lens or beam) and (mirror or lens or beam) and (mirror o	-	1	((369/13.02,13.33).CCLS.) and (((piezo or	USPAT;	2004/10/28
adjust\$4 or track\$4 or direction])   (piezo or piezo\$1electric or piezoelectric or bimorph)   (piezo or piezo\$1electric or piezoelectric or bimorph)   (dipezo or piezo\$1electric or piezoel			piezo\$1electric or piezoelectric or bimorph) and	US-PGPUB;	12:02
1984   (piezo or piezo\$1electric or piezoelectric or bimorph)   USPAT;   2004/10/28   15:47   EPO; JPO   JPO   USPAT;   2004/10/28   15:47   EPO; JPO   USPAT;   2004/10/28   EPO; JPO   USPAT;   200			((360/75,76,59,77.02,77.03).CCLS.)) and (align\$4 or	EPO; JPO	
adj actuator   US-R6PUB; EPO; JPO   USPAT;   US-R6PUB;   EPO					
adj actuator   US-R6PUB; EPO; JPO   USPAT;   US-R6PUB;   EPO	-	9984	(piezo or piezo\$1electric or piezoelectric or bimorph)	USPAT;	2004/10/28
Comparison			· ·	US-PGPUB;	15:47
adjactuator) and (magnetic adj dis\$1)			·	EPO; JPO	
adjactuator) and (magnetic adj dis\$1)	-	315	((piezo or piezo\$1electric or piezoelectric or bimorph)	USPAT;	2004/10/28
29    (((360/75,76,59,77.02,77.03),CCL.S.) and ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and ((magnetic adj dis\$1))				US-PGPUB;	12:04
29				EPO; JPO	
	_	29	((360/75 76 59 77.02 77.03).CCLS.) and (((piezo or		2004/10/28
actuator) and (magnetic adj dis\$1))  - 8653 (360/75,76,59,77.02,77.03,78.05).CCL5.  - 40 (((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (magnetic adj dis\$1)) and ((360/75,76,59,77.02,77.03,78.05).CCL5.)  - 3718 ((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mignetic adj dis\$1)) and ((360/75,76,59,77.02,77.03,78.05).CCL5.)  - 3718 (((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam) (US-P6PUB; 12:16 EPO; JPO USPAT; US-P6PUB; 12:18 EPO; JPO USPAT; US-P6PUB; 16:29 EPO; JPO USPAT; US-P6PUB; 16:14 EPO; JPO USPAT; US-P6PUB; 16:16 EPO; JPO USPAT; US-P6PUB; 16:16 EPO; JPO USPAT; US-P6PUB; 16:17 US-P6PUB; 16:18 EPO; JPO USPAT; US-P6PUB; 16:19 EPO; JPO USPAT; US-P6PUB; 16:10 EPO; JPO USPAT; US-P6					
- 8653 (360/75,76,59,77.02,77.03,78.05).CCLS. USPAT; US-PGPUB; 12:05  - 40 (((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (magnetic adj dis\$1)) and (360/75,76,59,77.02,77.03,78.05).CCLS.)  - 3718 ((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam) USPAT; US-PGPUB; 12:16  - 192 ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam) USPAT; 2004/10/28 US-PGPUB; 12:18  - 192 ((((piezo or piezo\$1electric or piezoelectric or USPAT; 2004/10/28 US-PGPUB; 12:18 EPO; JPO USPAT; 2004/10/28 US-PGPUB; 12:25 EPO; JPO USPAT; 2004/10/28 US-PGPUB; 16:29 EPO; JPO USPAT; 2004/10/28 US-PGPUB; 16:29 EPO; JPO USPAT; 2004/10/28 US-PGPUB; 16:14 EPO; JPO USPAT; 2004/10/28 US-PGPUB; 16:14 EPO; JPO USPAT; 2004/10/28 US-PGPUB; 16:14 EPO; JPO USPAT; 2004/10/28 US-PGPUB; 16:02 EPO; JPO USPAT; 2004/10/28 US-PGPUB; 16:03 EPO; J			, , , , , , , , , , , , , , , , , , , ,	-	
US-PGPUB;	_	8653		· ·	2004/10/28
40			(552, 57, 5757, 1527, 1537, 5.557, 5.557,		
- 40 (((piezo or piezo\$lelectric or piezoelectric or bimorph) adj actuator) and (magnetic adj dis\$1)) and ((360/75,6,59,77.02,77.03,78.05).CCL.S.)  - 3718 ((piezo or piezo\$lelectric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam) USPAT: US-PGPUB; EPO; JPO  - 192 ((((piezo or piezo\$lelectric or piezoelectric or USPAT: US-PGPUB; EPO; JPO)  - 192 ((((piezo or piezo\$lelectric or piezoelectric or USPAT: US-PGPUB; EPO; JPO)  - 192 ((((piezo or piezo\$lelectric or piezoelectric or USPAT: US-PGPUB; EPO; JPO)  - 192 ((((piezo or piezo\$lelectric or piezoelectric or USPAT: US-PGPUB; EPO; JPO)  - 116 (((((piezo or piezo\$lelectric or piezoelectric or USPAT; US-PGPUB; EPO; JPO)  - 116 ((((((((piezo or piezos)lelectric or piezoelectric or USPAT; US-PGPUB; EPO; JPO)  - 116 ((((((((((((((((((((((((((((((((((					12.00
bimorph) adj actuator) and (magnetic adj dis\$1)) and ((360/75,76,59,77.02,77.03,78.05).CCL.S.)   EPO; JPO   USPAT; 2004/10/28   12:18   EPO; JPO   USPAT; 2004/10/28   USPEPUB; 2004/10/28   12:18   EPO; JPO   USPAT; 2004/10/28   12:18   EPO; JPO   USPAT; 2004/10/28   12:25   EPO; JPO   IS:42   EPO; JPO   IS:42   EPO; JPO   USPAT; 2004/10/28   EPO;	_	40	(((niezo or niezo\$1electric or niezoelectric or		2004/10/28
(360/75,76,59,77.02,77.03,78.05).CCLS.)   EPO: JPO   USPAT: 2004/10/28   USPAT: 2004		10			
- 3718 ((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam) - 192 ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) - 192 ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) - 192 ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) - 104 (((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) - 105 (((((((((((((((((((((((((((((((((((			l	· ·	12.10
adj actuator) and (mirror or lens or beam)		3710	<del></del>		2004/10/28
- 192 ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1)) and actuator (((piezo or piezo\$1electric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1) (((piezo or piezo\$1electric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1) ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1) (((((piezo or piezo\$1electric or piezoelectric or bimorph) and (magnetic adj dis\$1)) and (laser or (heat adj EPO; JPO) (JSPAT; 2004/10/28 US-P6PUB; 15:42 (JS-P6PUB; 16:29 (JS-P6PUB; 16:29 (JS-P6PUB; 16:29 (ISPAT; 2004/10/28	-	3710	, , ,		1
192   ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam))   us-PGPUB;   12:18   12			day actuator) and (mirror or lens or beam)	· ·	12.10
Dimorph adj actuator) and (mirror or lens or beam) and (magnetic adj dis\$1)) and actuator		102	////niozo en niozo\$1elestnie en niozoelestnie en		2004/10/29
and (magnetic adj dis\$1)) and actuator  (((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1)  ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1)  ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1)) and (laser or (heat adj element)).  - 391 369/13.33,13.32,13.13,13.12,13.11,300.ccls.  13 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2) near5 (head or slider\$1))  - 247 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  - 83 (((piezo or piezo\$1electric or piezoelectric or bimorph) head or slider\$1)  - 7839 (((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 7839 ((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or USPAT; 2004/10/28 16:30  EPO: JPO USPAT; 2004/10/28 16:13  EPO: JPO USPAT; 2004/10/28 16:30	-	192			
- 192 (((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1) - 116 ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1) ((((piezo or piezo\$1electric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1)) and (laser or (heat adj EPO; JPO element)) - 391 369/13.33,13.32,13.13,13.12,13.11,300.ccls,  - 13 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2) near5 (head or slider\$1)) - 247 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2)) - 183 ((((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2)) - 183 (((((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1) - 7839 ((((((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1)) - 14 369/13.33,13.32,13.13,13.12,13.11,300.ccls, and (((((((((((((((((((((((((((((((((((					12:10
bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1)  (((((piezo or piezo\$1electric or piezoelectric or bimorph) and (magnetic adj dis\$1)) and (laser or (heat adj element)).  - 391 369/13.33,13.32,13.13,13.12,13.11,300.ccls.  USPAT; 2004/10/28  EPO; JPO  USPAT; 2004/10/28  EPO; JPO  13 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2) near5 (head or slider\$1)  - 247 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  - 83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  - 183 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1)  - 183 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1)  - 184 ((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 184 (((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 184 ((((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 185 ((((((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 185 (((((((((((((((((((((((((((((((((((		102		· ·	2004/10/20
and (magnetic adj dis\$1)  ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1)) and (laser or (heat adj EPO; JPO element)).  391 369/13.33,13.32,13.13,13.12,13.11,300.ccls.  USPAT; 2004/10/28	-	192			
- 116 ((((piezo or piezo\$1electric or piezoelectric or bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1)) and (laser or (heat adj element)).  - 391 369/13.33,13.32,13.13,13.12,13.11,300.ccls.  - 13 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2) near5 (head or slider\$1))  - 247 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  - 83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  - 7839 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2)))  - 7839 (((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 7839 (((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 7839 (((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 7839 (((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 7839 (((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or Dimorph) USPAT			I	1	12:20
bimorph) adj actuator) and (mirror or lens or beam)) and (magnetic adj dis\$1)) and (laser or (heat adj element)).		116	_		2004/10/20
and (magnetic adj dis\$1)) and (laser or (heat adj element)).  391 369/13.33,13.32,13.13,13.12,13.11,300.ccls.  ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2) near5 (head or slider\$1))  ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1)  (((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1)  (((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or bimorph) to SPAT; 2004/10/28 ((((piezo or piezo\$1electric or piezoelectric or bimorph) to SPAT; 2004/10/28 (((((piezo or piezo\$1electric or piezoelectric or bimorph) to SPAT; 2004/10/28 ((((((((((((((((((((((((((((((((((((	-	110	, · · · · · · · · · · · · · · · · · · ·		
- slement)) - 391 369/13.33,13.32,13.13,13.12,13.11,300.ccls. USPAT; US-PGPUB; EPO; JPO USPAT; US-PGPUB; I6:30 EPO; JPO USPAT; US-PGPUB; III EPO; JPO			· · · · · · · · · · · · · · · · · · ·		15:42
- 391 369/13,33,13,32,13,13,12,13,11,300,ccls.  ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2) near5 (head or slider\$1))  ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1)  ((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  7839 ((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  14 369/13,33,13,32,13,13,13,12,13,11,300,ccls. and (((piezo or piezo\$1electric or piezoelectric or bimorph) ((((piezo or piezo\$1electric or piezoelectric or bimorph) (((((piezo or piezo\$1electric or piezoelectric or bimorph) ((((((((((((((((((((((((((((((((((((				EPO; JPO	
- 13 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2) near5 (head or slider\$1)) - 247 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2)) - 83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2)) - 83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1) - 7839 ((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1) - 14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or ((piezo or piezo\$1electric or ((piezo or					2004/40/22
- 13 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2) near5 (head or slider\$1))  - 247 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  - 83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  - 83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (bead or slider\$1)  - 7839 ((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or bimorph) (USPAT; 2004/10/28 16:30)  - 14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or bimorph) (USPAT; 2004/10/28 16:18)	_	391	369/13,33,13,32,13,13,13,12,13,11,300,ccls.		
13 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2) near5 (head or slider\$1))  247 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  248 (((piezo or piezo\$1electric or piezoelectric or piezoelectric or piezoelectric or pimorph) near10 (magnet\$2 near2 optic\$2))  259 (((piezo or piezo\$1electric or piezoelectric or pimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1) (((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  2004/10/28 16:13 EPO: JPO USPAT: US-PGPUB:					16:29
near10 (magnet\$2 near2 optic\$2) near5 (head or slider\$1))   247   ((piezo or piezo\$1electric or piezoelectric or bimorph)   USPAT;   2004/10/28   16:02     83   (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))   USPAT;   2004/10/28   16:02     83   ((((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and   USPAT;   2004/10/28   16:13     ((piezo or piezo\$1electric or piezoelectric or bimorph)   EPO; JPO   USPAT;   2004/10/28     ((piezo or piezo\$1electric or piezoelectric or bimorph)   USPAT;   2004/10/28     US-PGPUB;   EPO; JPO   16:30     USPAT;   2004/10/28   16:30     USPAT;					0004110100
Slider\$1))	-	13	· · · · · · · · · · · · · · · · · · ·		1
- 247 ((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))  - 83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1) ((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or bimorph) DSPAT; EPO; JPO USPAT; US-PGPUB; EPO; JPO USPAT; US-PGPUB; EPO; JPO USPAT; US-PGPUB; 16:30 EPO; JPO USPAT; US-PGPUB; 16:30					16:14
near10 (magnet\$2 near2 optic\$2))  83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1)  7839 ((piezo or piezo\$1electric or piezoelectric or bimorph) ((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or bimorph) (((piezo or piezo\$1electric or piezoelectric or bimorph) (((piezo or piezo\$1electric or piezoelectric or bimorph) ((((piezo or piezo\$1electric or piezoelectric or bimorph) ((((((piezo or piezo\$1electric or piezoelectric or bimorph) ((((((((((((((((((((((((((((((((((((			, ,,		
- 83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1) ((piezo or piezo\$1electric or piezoelectric or bimorph) (piezo or piezo\$1electric or piezoelectric or pi	-	247		-	
- 83 (((piezo or piezo\$1electric or piezoelectric or bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1)  - 7839 ((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  - 14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or bimorph) EPO; JPO  14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or bimorph) EPO; JPO  15 16:13  16:13  16:13  16:13  16:30  16:30  16:30  16:30  16:30  16:30  16:30			near10 (magnet\$2 near2 optic\$2))		16:02
bimorph) near10 (magnet\$2 near2 optic\$2))) and (head or slider\$1)  7839 ((piezo or piezo\$1electric or piezoelectric or bimorph) near5 (head or slider\$1))  14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or bimorph) EPO; JPO  14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or bimorph) USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or bimorph) USPAT; 16:18		-			
(head or slider\$1)  ((piezo or piezo\$1electric or piezoelectric or bimorph) ((piezo or piezo\$1electric or piezoelectric or bimorph) ((piezo or piezo\$1electric or piezoelectric or bimorph) ((spiezo or piezo\$1electric or piezoelectric or bimorph) (spiezo or piezoelectric or piezoelectric or bimorph) (spiezoelectric or piezoelectric or bimorph) (spiezoelectric or piezoelectric or bimorph) (spiezoelectric or piezoelectric or bimorph)	-	83			
- 7839 ((piezo or piezo\$1electric or piezoelectric or bimorph) USPAT; 2004/10/28 near5 (head or slider\$1)) US-PGPUB; EPO; JPO - 14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or US-PGPUB; 16:18				US-PGPUB;	16:13
near5 (head or slider\$1))  US-PGPUB; EPO; JPO  14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and (((piezo or piezo\$1electric or piezoelectric or US-PGPUB; 16:18				EPO; JPO	
EPO; JPO  14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and	-	7839	((piezo or piezo\$1electric or piezoelectric or bimorph)	USPAT;	
- 14 369/13.33,13.32,13.13,13.12,13.11,300.ccls. and USPAT; 2004/10/28 (((piezo or piezo\$1electric or piezoelectric or US-PGPUB; 16:18		*	near5 (head or slider\$1))	US-PGPUB;	16:30
(((piezo or piezo\$1electric or piezoelectric or US-PGPUB; 16:18				EPO; JPO	
(((piezo or piezo\$1electric or piezoelectric or US-PGPUB; 16:18	-	. 14	369/13.33,13.32,13.13,13.12,13.11,300.ccls. and	USPAT;	2004/10/28
				US-PGPUB;	16:18
			1	EPO; JPO	

	400	2/0/200	LICDAT	2004/10/25
-	103	369/300.ccls.	USPAT;	2004/10/29
			US-PGPUB;	10:01
	227	240/42 22 42 22 42 42 42 42 44 222	EPO; JPO	2004/40/20
-	336	369/13.33,13.32,13,13,13,12,13,11,300.ccls. and (slider	USPAT;	2004/10/28
		or head)	US-PGPUB;	16:55
	44	(niana an niana d'Ialantuia an niana al catala an himanala)	EPO; JPO USPAT;	2004/10/28
-	44	(piezo or piezo\$1electric or piezoelectric or bimorph)		
		and (369/13,33,13,32,13.13,13,12,13,11,300.ccls. and (slider or head))	US-PGPUB; EPO; JPO	16:52
	0	(piezo or piezo\$1electric or piezoelectric or bimorph)	USPAT;	2004/10/28
	ı	and 369/13.33,13.11,13.1	US-PGPUB;	16:52
		und 307/13.33,13.11,13.1	EPO; JPO	10.52
_	46	(piezo or piezo\$1electric or piezoelectric or bimorph)	USPAT;	2004/10/28
		and 369/13.33,13.32,13.13,13.12,13.11,300.ccls.	US-PGPUB;	16:52
			EPO; JPO	
-	191	(360/77.16). <i>CC</i> LS.	USPAT;	2004/10/28
			US-PGPUB;	16:56
			EPO; JPO	
-	190	((360/77.16).CCLS.) and (head or slider)	USPAT;	2004/10/28
			US-PGPUB;	16:56
			EPO; JPO	
-	14	(((360/77.16).CCLS.) and (head or slider)) and (heat or	USPAT;	2004/10/28
		heater)	US-PGPUB;	16:57
:			EPO; JPO	
-	37	369/13.12.ccls.	USPAT;	2004/10/29
			US-PGPUB;	09:08
		(40) (1) (2)	EPO; JPO	0004//0/25
-	28636	((write or record\$3) adj head) same (adjust\$3 or	USPAT;	2004/10/29
		position\$3 or align\$3 or track\$3)	US-PGPUB;	09:13
_	616	(((umite on necond\$2) = 4: h==4) ==== (=4:==4\$2 ==	EPO; JPO	2004/10/20
-	010	(((write or record\$3) adj head) same (adjust\$3 or position\$3 or align\$3 or track\$3)) and (heat near5	USPAT; US-PGPUB;	2004/10/29 09:14
		postilongs or aligngs or trackgs)) and (neat nears     area)	EPO; JPO	U3.14
_	7	(((((write or record\$3) adj head) same (adjust\$3 or	USPAT;	2004/10/29
	,	position\$3 or align\$3 or track\$3)) and (heat near5	US-PGPUB;	09:15
		_area))_and_(piezo_or_piezo\$1electric_or_piezoelectric	EPO; JPO	
		or bimorph)) and slider		
-	126	((((write or record\$3) adj head) same (adjust\$3 or	USPAT;	2004/10/29
		position\$3 or align\$3 or track\$3)) and (heat near5	US-PGPUB;	09:50
		area)) and (piezo or piezo\$1electric or piezoelectric	EPO; JPO	
		or bimorph)		
-	28	thermal adj record\$3 same heat adj element	USPAT;	2004/11/03
			US-PGPUB;	13:03
			EPO; JPO	
-	4	((magnet\$2 near2 optic) same (align\$3 or adjust\$3)	USPAT;	2004/10/29
		near2 head)	US-PGPUB;	10:04
	_	/"5094079"   "4014200"   "42342299"   "4242250"	EPO; JPO	2004/10/20
]	6	("5986978"   "6016290"   "6243288"   "6243350"   "6307818"   "6507540").PN.	USPAT	2004/10/29
_	2	((magnet\$2 near2 optic adj dis\$1) same (align\$3 or	USPAT;	2004/10/29
		adjust\$3) near2 head)	US-PGPUB;	11:26
		augusty of them a themay	EPO; JPO	11.20
-	2	(("6324130") or ("6275454")).PN.	USPAT;	2004/10/29
	_	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	US-PGPUB;	10:31
			EPO; JPO	
		2.00.21.04		1

•	1034	360/59,294.1,294.2,294.3,294.4,294.5,294.6.ccls.	USPAT;	2004/10/29 11:01
			US-PGPUB;	
			EPO; JPO	
-	225	360/59,294.1,294.2,294.3,294.4,294.5,294.6.ccls.	USPAT;	2004/10/29
		and ((position\$3 or align\$3 or track\$3) near head and	US-PGPUB;	11:02
		slider)	EPO; JPO	
-	332	360/59,294.1,294.2,294.3,294.4,294.5,294.6.ccls.	USPAT;	2004/11/03
		and ((position\$3 or align\$3 or track\$3) near head)	US-PGPUB;	13:05
			EPO; JPO	
-	18	(360/59,294.1,294.2,294.3,294.4,294.5,294.6.ccls.	USPAT;	2004/10/29
		and ((position\$3 or align\$3 or track\$3) near head))	US-PGPUB;	11:03
		and (magnet\$2 near2 optic)	EPO; JPO	